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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,156	07/11/2003	Jean Yee-Mei Yang	0180117	4060
25700	7590	05/02/2005	EXAMINER	
FARJAMI & FARJAMI LLP 26522 LA ALAMEDA AVENUE, SUITE 360 MISSION VIEJO, CA 92691			TRINH, HOA B	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,156

Applicant(s)

YANG ET AL.

Examiner

Vikki H. Trinh

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 22-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 22-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. Claims 1-11 and 22-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao et al. (5,999,152) (hereinafter Liao) in view of Matsumoto et al. (6,545,739) (hereinafter Matsumoto).

Liao discloses, as to claims 1 and 22, a memory transistor comprising a substrate 'g' (figs. 1 and 2) having a drain region (figs. 1 and 2), a source region 'b' (figs. 1 and 2) and a channel region being between said source region and said drain region (figs. 1 and 2); a gate layer 'c' (figs. 1 and 2) formed over said channel region of said substrate 'g' (figs. 1 and 2); a dielectric 'h' (figs. 1 and 2) formed over said gate layer and said substrate 'g' (col. 5, lines 4-12).

However, Liao does not explicitly teach that the dielectric is a tunable interlayer dielectric layer.

Matsumoto discloses a semiconductor device having a substrate 106 (fig. 1), an electrode 105 (fig. 1) or 304 (fig. 3A), and a tunable interlayer dielectric layer 104 (fig. 1) or 303 (fig. 3A) , said tunable dielectric layer comprising a matrix and tunable material situated within said matrix (col. 6, lines 59-67); said dielectric having a transparent state and an opaque state, said transparent state allowing UV rays to pass through said tunable interlayer dielectric to said electrode layer , said opaque state preventing UV ray to pass through said tunable interlayer dielectric to said electrode layer (figs. 1 and 3A).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dielectric layer of Liao with a tunable dielectric layer, as taught by Matsumoto, so as to provide a selection of wavelength of the incident light (Matsumoto, col. 5, lines 49-50)

According to claim 2 and 23, Matsumoto teaches the tunable material comprises a plurality of liquid crystal droplets '301 (fig. 3A), each of said plurality of liquid crystal droplets having a corresponding crystal director, said corresponding crystal director defining a polar orientation of each of said plurality of liquid crystal droplets (col. 9, lines 9-50).

As to claims 3-5 and 24, Matsumoto teaches that the corresponding crystal director has a random orientation within said matrix during said opaque state (col. 9, lines 9-50).

As to claims 6 and 25, the corresponding crystal director has a uniform orientation within the matrix during the transparent state (col. 9, lines 9-50).

As to claims 7-8 and 26, Matsumoto teaches that the transparent state is enabled when a magnetic field is or is not applied across the tunable interlayer dielectric (col. 9, lines 9-50).

As to claims 9 and 27, Matsumoto teaches that the tunable material is selected from a group consisting of electrically tunable material and magnetically tunable material (col. 6, lines 60-67).

As to claims 10 and 28, Matsumoto teaches that the matrix is polymer (col. 6, lines 60-67).

As to claims 11 and 29, Liao teaches that the gate layer 'c' is a storing layer (fig. 1).

Response to Arguments

4. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Vikki Trinh whose telephone number is (571) 272-1719. The Examiner can normally be reached from Monday-Friday, 9:00 AM - 5:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Wael Fahmy, can be reached at (571) 272-1705. The office fax number is 703-872-9306.


Any request for information regarding to the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Also, status information for published applications may be obtained from either Private PAIR or Public Pair. In addition, status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. If you have questions pertaining to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Lastly, paper copies of cited U.S. patents and U.S. patent application publications will cease to be mailed to applicants with Office actions as of June 2004. Paper copies of foreign patents and non-patent literature will continue to be included with office actions. These cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 for information on this policy. Requests

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to restart a period for response due to a missing U.S. patent or patent application publications will not be granted.

Vikki Trinh,
Patent Examiner
AU 2814



HOWARD WEISS
PRIMARY EXAMINER